



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] LLIA000974-013A
 [TESTLAB] LightLab International Allentown, LLC
 [MANUFAC] Mobern Lighting Co., 8200 Stayton Drive, Jessup, MD 20794, USA
 [LUMCAT] HBIA48-LED104DMVFR35
 [LUMINAIRE] Catalog Number: HBIA48-LED104DMVFR35
 [MORE] Pendant/surface mounted, formed steel housing, formed aluminum LED mounting plates, frosted plastic enclosures.
 [MORE] 624 white LEDs, four ULT Everline M18CC835D156N2S50C LED boards with 156 LEDs each.
 [MORE] Two ULT Everline D23CC90UNVTW-F LED drivers each set at 1190mA
 [MORE] 120.0Vac, 60.00Hz, 0.8487A, 101.1W, 0.993PF, 7.6%THD(i)
 [OTHER] Absolute test - lamp lumens value set to -1
 [MORE] NA conventions used for C0 plane alignment and C-plane rotation direction.
 [MORE] The sample was tested at a distance of 9.5m.
 [MORE] This IES file created by LightLab/LSA Report program version 3.820a.
 [DATE] This file created: Wednesday, May 2, 2018 10:19:43 AM
 [ISSUE DATE] Wednesday, May 2, 2018 10:19:43 AM

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12191
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	101.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.14 m
Luminous Width (90-270)	0.29 m
Luminous Height	0.00 m

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10344	10940	11611
55	9626	10564	11633
65	8726	10468	12300
75	7153	11642	14702
85	3892	19971	29179

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	3989.52	3989.52	3989.52	3989.52	3989.52
0.5	4016.62	3991.07	3983.33	3980.48	3988.58
1.0	4015.74	3990.32	3982.75	3979.81	3987.90
1.5	4014.46	3989.26	3981.81	3979.00	3986.89
2.0	4012.68	3987.67	3980.54	3977.82	3985.64
2.5	4010.49	3985.43	3978.79	3976.41	3984.00
3.0	4007.66	3983.01	3976.63	3974.51	3982.02
3.5	4004.38	3980.07	3974.13	3972.41	3979.74
4.0	4000.77	3976.80	3971.34	3969.83	3977.01
4.5	3996.69	3972.90	3967.87	3967.03	3974.27
5.0	3992.39	3968.70	3964.38	3964.13	3971.08
5.5	3987.30	3964.10	3960.50	3960.73	3967.55
6.0	3982.02	3958.96	3956.02	3956.87	3963.79
6.5	3975.89	3953.45	3951.25	3952.74	3959.65
7.0	3969.76	3947.63	3945.97	3948.55	3955.09
7.5	3962.87	3941.29	3940.36	3943.69	3950.28
8.0	3955.74	3934.55	3934.42	3938.76	3945.35
8.5	3947.61	3927.43	3928.09	3933.43	3939.93
9.0	3939.74	3919.83	3921.65	3927.84	3934.56
9.5	3931.29	3911.82	3914.69	3921.87	3928.38
10.0	3922.35	3903.39	3907.33	3915.32	3922.16
10.5	3912.99	3894.66	3899.53	3908.77	3915.33
11.0	3903.04	3885.24	3891.26	3901.94	3908.49
11.5	3892.81	3875.52	3882.95	3894.79	3901.23
12.0	3881.99	3865.35	3874.00	3887.04	3893.58
12.5	3870.88	3855.21	3864.94	3879.44	3885.85
13.0	3859.27	3844.07	3855.10	3870.99	3877.39
13.5	3847.29	3832.93	3845.38	3862.53	3869.05
14.0	3835.37	3821.39	3835.33	3853.94	3860.50
14.5	3822.51	3809.20	3824.59	3844.99	3851.35
15.0	3809.27	3796.86	3813.66	3835.51	3842.17
15.5	3795.68	3783.85	3802.09	3825.52	3832.18
16.0	3781.82	3770.61	3790.40	3815.65	3822.57
16.5	3767.16	3756.72	3778.24	3805.15	3811.98
17.0	3752.71	3742.94	3765.87	3794.60	3801.13
17.5	3737.07	3728.27	3752.71	3783.39	3790.11
18.0	3721.91	3713.78	3739.46	3772.20	3778.96
18.5	3706.03	3698.72	3726.39	3760.68	3767.50
19.0	3689.76	3682.92	3712.15	3748.72	3755.90
19.5	3672.97	3667.05	3698.02	3736.48	3743.28
20.0	3655.82	3650.56	3683.24	3723.79	3730.67
20.5	3638.77	3634.21	3668.49	3710.91	3718.18
21.0	3620.54	3616.97	3653.14	3697.49	3704.95
21.5	3602.85	3599.87	3637.62	3684.12	3691.71
22.0	3584.23	3582.12	3621.65	3670.17	3677.67
22.5	3565.43	3564.35	3605.60	3656.35	3663.93
23.0	3546.74	3546.38	3589.18	3641.98	3649.81
23.5	3527.24	3527.43	3572.21	3626.96	3635.03
24.0	3507.28	3508.62	3555.01	3611.94	3620.17
24.5	3486.81	3489.05	3537.31	3596.47	3604.61
25.0	3466.66	3469.53	3519.47	3580.71	3588.83
25.5	3445.76	3449.31	3501.14	3564.52	3573.23
26.0	3424.78	3429.39	3482.75	3548.24	3556.68
26.5	3403.03	3408.45	3463.67	3531.43	3539.80

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION - (Cont.)**

27.0	3381.47	3387.80	3444.71	3514.41	3523.10
27.5	3359.83	3366.88	3425.71	3497.19	3506.06
28.0	3337.10	3345.19	3405.59	3479.46	3488.60
28.5	3314.78	3323.43	3385.82	3461.61	3470.71
29.0	3291.58	3301.13	3365.05	3442.83	3452.27
29.5	3268.91	3278.97	3344.76	3424.35	3434.30
30.0	3245.38	3256.05	3323.54	3405.25	3415.33
30.5	3222.25	3233.35	3302.47	3386.25	3396.52
31.0	3198.20	3210.26	3280.68	3366.27	3376.72
31.5	3174.84	3187.31	3259.23	3346.84	3357.69
32.0	3151.23	3164.16	3237.47	3326.79	3338.10
32.5	3126.16	3140.09	3214.78	3306.20	3317.57
33.0	3100.86	3116.19	3192.16	3285.49	3297.45
33.5	3074.75	3091.63	3168.99	3264.27	3276.41
34.0	3049.24	3067.56	3146.12	3243.08	3255.92
34.5	3022.96	3042.17	3122.42	3221.32	3234.18
35.0	2997.44	3016.80	3098.50	3199.19	3212.72
35.5	2971.15	2991.34	3074.81	3177.35	3191.50
36.0	2944.95	2965.48	3050.59	3154.96	3169.22
36.5	2918.96	2940.08	3026.59	3132.50	3147.50
37.0	2891.90	2913.71	3001.68	3109.24	3124.85
37.5	2865.41	2887.67	2977.11	3086.19	3102.71
38.0	2838.10	2860.82	2951.77	3062.52	3079.36
38.5	2810.80	2834.57	2926.72	3039.05	3056.58
39.0	2783.13	2807.51	2901.16	3014.86	3033.09
39.5	2755.88	2780.99	2875.79	2991.01	3010.03
40.0	2727.81	2753.46	2849.70	2966.37	2985.98
40.5	2700.18	2726.51	2823.87	2942.09	2962.49
41.0	2672.36	2699.45	2797.93	2917.79	2938.85
41.5	2644.22	2671.54	2771.58	2892.48	2914.38
42.0	2615.69	2644.07	2745.12	2867.39	2890.38
42.5	2586.57	2615.90	2718.34	2841.98	2865.69
43.0	2558.30	2588.13	2691.96	2816.77	2841.47
43.5	2529.12	2559.98	2664.75	2790.99	2816.32
44.0	2500.47	2531.81	2637.93	2765.45	2791.68
44.5	2471.14	2503.00	2610.05	2739.25	2766.29
45.0	2442.27	2474.40	2582.93	2713.60	2741.43
45.5	2413.28	2446.03	2555.73	2688.00	2716.56
46.0	2383.50	2416.71	2527.74	2661.20	2690.91
46.5	2354.42	2388.19	2500.50	2635.09	2665.40
47.0	2324.41	2358.69	2472.47	2608.17	2639.66
47.5	2295.23	2329.87	2445.09	2582.03	2614.31
48.0	2265.29	2300.21	2416.75	2554.95	2588.09
48.5	2235.75	2271.27	2389.14	2528.37	2562.35
49.0	2205.45	2241.29	2360.95	2501.33	2536.38
49.5	2175.84	2212.09	2333.13	2474.62	2510.61
50.0	2146.05	2182.93	2305.11	2447.79	2484.53
50.5	2115.98	2152.79	2277.11	2420.28	2458.86
51.0	2086.03	2123.30	2248.98	2393.68	2433.27
51.5	2055.33	2093.12	2220.60	2366.12	2407.02
52.0	2025.38	2063.52	2192.76	2339.40	2381.49
52.5	1994.71	2033.10	2164.17	2311.90	2355.37
53.0	1964.96	2003.62	2136.27	2285.40	2330.23
53.5	1934.08	1973.00	2107.63	2258.03	2304.03
54.0	1904.26	1943.30	2079.71	2231.37	2278.72
54.5	1874.30	1913.65	2051.91	2204.94	2253.66

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION - (Cont.)**

55.0	1843.47	1883.08	2023.24	2177.86	2227.82
55.5	1813.49	1853.23	1995.35	2151.54	2202.75
56.0	1782.79	1822.67	1966.79	2124.52	2176.89
56.5	1752.73	1792.86	1939.00	2098.47	2151.95
57.0	1722.13	1762.41	1910.43	2071.90	2126.43
57.5	1691.72	1732.36	1882.61	2045.99	2101.57
58.0	1660.98	1701.61	1854.07	2019.59	2076.04
58.5	1630.78	1671.73	1826.40	1993.86	2051.48
59.0	1600.54	1641.69	1798.93	1968.20	2026.99
59.5	1569.69	1611.20	1770.72	1942.42	2001.67
60.0	1539.46	1581.17	1743.47	1917.06	1977.23
60.5	1508.50	1550.40	1715.77	1891.27	1952.38
61.0	1478.12	1520.61	1688.94	1866.44	1928.23
61.5	1446.93	1489.89	1661.34	1840.80	1903.31
62.0	1416.57	1459.98	1634.49	1816.18	1879.15
62.5	1385.32	1429.35	1607.66	1790.72	1854.96
63.0	1354.79	1399.54	1581.28	1766.34	1830.83
63.5	1324.15	1369.83	1555.03	1741.85	1806.99
64.0	1293.27	1339.68	1528.98	1717.41	1783.24
64.5	1261.92	1309.77	1503.08	1692.98	1759.12
65.0	1231.40	1280.05	1477.09	1668.80	1735.71
65.5	1200.38	1250.57	1451.82	1644.96	1711.91
66.0	1168.76	1220.84	1426.00	1620.61	1688.34
66.5	1137.97	1191.75	1401.12	1597.30	1665.21
67.0	1106.97	1162.29	1375.93	1573.19	1641.43
67.5	1075.98	1133.53	1351.28	1549.94	1618.67
68.0	1045.66	1105.42	1327.25	1527.04	1596.07
68.5	1014.32	1076.55	1302.73	1503.70	1572.90
69.0	983.77	1048.45	1279.00	1480.96	1550.27
69.5	952.44	1020.00	1254.84	1457.69	1527.19
70.0	921.96	992.37	1231.36	1435.32	1504.85
70.5	890.63	964.15	1207.62	1412.27	1481.86
71.0	860.06	937.07	1184.66	1389.93	1459.41
71.5	828.97	909.38	1161.11	1367.19	1436.07
72.0	798.63	883.08	1138.57	1344.95	1413.53
72.5	768.79	856.78	1116.25	1322.77	1390.58
73.0	737.92	830.99	1093.72	1299.81	1367.01
73.5	708.02	805.40	1071.73	1277.20	1343.65
74.0	677.58	779.96	1049.46	1254.32	1319.42
74.5	648.20	755.40	1028.05	1231.31	1295.47
75.0	618.13	730.69	1006.06	1207.38	1270.52
75.5	589.14	706.91	984.93	1183.88	1245.97
76.0	559.51	682.96	963.17	1159.43	1220.54
76.5	531.16	659.91	942.16	1135.40	1196.07
77.0	503.21	637.48	921.12	1111.25	1172.29
77.5	474.58	614.79	899.38	1086.72	1148.90
78.0	447.28	592.93	877.86	1063.39	1127.06
78.5	419.39	571.00	855.62	1040.45	1105.26
79.0	392.74	549.81	833.41	1018.94	1084.22
79.5	365.71	528.62	810.16	997.54	1063.38
80.0	339.81	508.06	787.18	977.45	1043.45
80.5	313.78	487.35	763.82	957.37	1022.97
81.0	288.97	467.57	741.69	937.96	1003.42
81.5	265.02	448.02	720.68	918.98	983.99
82.0	240.84	428.42	699.84	899.96	964.57
82.5	217.74	409.26	679.96	881.30	945.30

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION - (Cont.)**

83.0	195.20	389.80	659.96	862.43	925.71
83.5	173.69	370.85	640.54	844.10	906.84
84.0	152.39	351.02	620.69	825.11	887.22
84.5	132.71	331.02	601.28	806.27	868.22
85.0	113.27	310.03	581.19	786.71	849.14
85.5	95.53	290.46	561.21	766.04	821.29
86.0	79.03	271.20	540.66	733.74	778.65
86.5	63.13	251.18	517.36	687.36	726.55
87.0	49.06	231.12	484.81	637.12	673.58
87.5	36.33	209.65	440.40	583.53	618.21
88.0	25.51	186.54	392.41	529.81	563.64
88.5	16.32	157.39	342.35	474.16	507.52
89.0	9.07	123.24	296.73	422.02	454.73
89.5	3.32	96.89	259.52	378.44	410.61
90.0	0.27	83.37	234.18	348.09	378.77
90.5	0.18	75.91	218.05	326.70	356.85
91.0	0.23	71.03	209.74	315.43	345.45
91.5	0.33	66.71	202.71	306.99	337.20
92.0	0.45	62.59	195.80	298.53	328.76
92.5	0.54	60.25	189.44	290.79	320.86
93.0	0.69	57.84	183.17	282.94	312.65
93.5	0.94	54.21	177.28	275.85	305.12
94.0	1.32	47.19	178.24	268.41	297.56
94.5	1.73	42.75	182.61	261.36	289.81
95.0	1.88	38.78	184.16	261.74	282.97
95.5	1.94	35.33	183.88	272.79	289.02
96.0	1.95	32.19	179.41	280.42	302.77
96.5	2.00	29.33	163.60	285.56	313.61
97.0	2.07	26.64	143.91	287.71	321.60
97.5	2.03	24.08	130.99	286.13	326.97
98.0	2.06	21.78	122.77	275.02	328.79
98.5	2.22	19.55	115.87	249.16	321.61
99.0	2.17	17.54	109.60	221.79	298.32
99.5	2.33	15.68	103.67	201.53	266.41
100.0	2.36	13.89	98.01	187.59	238.49
100.5	2.47	12.25	92.90	177.75	218.97
101.0	2.55	10.76	88.02	169.62	204.14
101.5	2.56	9.38	83.52	162.53	193.58
102.0	2.80	8.05	78.95	155.52	185.32
102.5	2.87	6.89	74.79	148.99	178.57
103.0	3.16	5.91	70.58	142.58	172.16
103.5	3.29	5.11	66.69	136.76	165.98
104.0	3.50	4.47	62.85	131.24	160.06
104.5	3.61	3.96	59.14	125.92	154.07
105.0	3.83	3.65	55.57	120.83	148.42
105.5	3.92	3.28	52.12	115.93	142.69
106.0	4.09	3.09	48.77	111.06	137.40
106.5	4.28	3.09	45.53	106.26	131.98
107.0	4.38	3.03	42.44	101.67	126.90
107.5	4.55	3.07	39.44	97.09	121.72
108.0	4.61	3.15	36.59	92.81	116.74
108.5	4.75	3.13	33.79	88.50	111.89
109.0	5.00	3.21	31.11	84.18	107.01
109.5	5.04	3.22	28.51	80.06	102.36
110.0	5.30	3.26	26.03	75.96	97.62
110.5	5.38	3.30	23.68	71.97	93.16

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION - (Cont.)**

111.0	5.58	3.35	21.42	68.03	88.58
111.5	5.66	3.44	19.31	64.29	84.32
112.0	5.85	3.46	17.25	60.57	80.02
112.5	5.94	3.55	15.37	57.00	75.92
113.0	6.16	3.62	13.67	53.56	71.93
113.5	6.30	3.69	12.05	50.08	67.81
114.0	6.45	3.75	10.58	46.80	64.02
114.5	6.58	3.93	9.32	43.56	60.19
115.0	6.86	4.05	8.26	40.50	56.60
115.5	7.02	4.07	7.43	37.46	52.99
116.0	7.17	4.19	6.73	34.69	49.67
116.5	7.34	4.42	6.11	31.87	46.29
117.0	7.48	4.52	5.62	29.23	43.07
117.5	7.67	4.65	5.37	26.73	40.07
118.0	7.94	4.85	5.16	24.26	37.11
118.5	8.08	4.98	5.06	21.91	34.16
119.0	8.18	5.06	5.09	19.77	31.37
119.5	8.47	5.21	5.06	17.74	28.72
120.0	8.70	5.45	5.21	15.76	26.23
120.5	8.94	5.58	5.27	14.07	23.82
121.0	9.16	5.73	5.39	12.68	21.48
121.5	9.39	5.92	5.52	11.46	19.37
122.0	9.63	6.12	5.68	10.42	17.52
122.5	9.89	6.28	5.86	9.54	15.58
123.0	10.01	6.43	6.04	8.85	14.02
123.5	10.36	6.63	6.16	8.31	12.68
124.0	10.61	6.84	6.43	7.79	11.51
124.5	10.94	7.04	6.52	7.53	10.68
125.0	11.09	7.27	6.79	7.35	9.89
125.5	11.43	7.40	6.94	7.32	9.32
126.0	11.71	7.64	7.17	7.35	8.76
126.5	11.92	7.79	7.34	7.39	8.41
127.0	12.24	7.98	7.58	7.50	8.25
127.5	12.42	8.14	7.81	7.62	8.20
128.0	12.59	8.25	7.95	7.88	8.16
128.5	12.89	8.43	8.17	8.08	8.18
129.0	13.19	8.58	8.46	8.35	8.29
129.5	13.42	8.65	8.59	8.45	8.36
130.0	13.65	8.85	8.85	8.66	8.60
130.5	13.82	8.99	9.01	8.91	8.85
131.0	14.01	9.07	9.18	9.08	9.06
131.5	14.27	9.32	9.41	9.29	9.24
132.0	14.38	9.54	9.57	9.44	9.49
132.5	14.54	9.72	9.75	9.65	9.61
133.0	14.73	9.99	9.93	9.78	9.85
133.5	14.91	10.23	10.07	9.87	9.97
134.0	15.01	10.40	10.27	10.05	10.18
134.5	15.10	10.78	10.42	10.11	10.30
135.0	15.20	10.99	10.46	10.19	10.43
135.5	15.31	11.33	10.64	10.31	10.35
136.0	15.51	11.65	10.68	10.38	10.46
136.5	15.55	12.01	10.79	10.48	10.44
137.0	15.71	12.24	10.89	10.46	10.56
137.5	15.83	12.67	10.93	10.56	10.49
138.0	15.83	13.03	10.96	10.64	10.61
138.5	15.94	13.34	11.07	10.61	10.60

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES****CANDELA TABULATION - (Cont.)**

139.0	15.93	13.77	11.07	10.67	10.53
139.5	16.02	14.12	11.16	10.69	10.66
140.0	16.05	14.55	11.15	10.72	10.57
140.5	16.11	14.86	11.13	10.82	10.74
141.0	16.15	15.25	11.08	10.85	10.70
141.5	16.14	15.66	11.09	10.86	10.75
142.0	16.24	15.97	11.06	10.92	10.79
142.5	16.20	16.14	11.00	10.88	10.73
143.0	16.25	16.22	11.02	10.93	10.86
143.5	16.27	16.41	10.93	10.96	10.84
144.0	16.27	16.54	10.85	11.04	10.92
144.5	16.19	16.68	10.74	11.09	11.02
145.0	16.30	16.72	10.63	11.06	11.01
145.5	16.35	16.85	10.57	11.16	11.00
146.0	16.31	16.93	10.56	11.17	11.10
146.5	16.37	17.13	10.39	11.15	11.11
147.0	16.40	17.27	10.41	11.25	11.16
147.5	16.46	17.56	10.35	11.24	11.25
148.0	16.50	17.66	10.35	11.25	11.19
148.5	16.52	17.81	10.41	11.21	11.24
149.0	16.49	17.96	10.57	11.14	11.23
149.5	16.46	18.14	10.75	11.12	11.28
150.0	16.38	18.13	10.87	11.00	11.17
150.5	16.28	18.21	11.10	10.88	11.12
151.0	16.22	18.21	11.40	10.76	11.15
151.5	16.11	18.30	11.71	10.61	11.00
152.0	16.01	18.24	12.06	10.51	10.93
152.5	15.86	18.26	12.41	10.31	10.70
153.0	15.88	18.31	12.85	10.21	10.61
153.5	15.83	18.34	13.30	10.04	10.45
154.0	15.68	18.33	13.74	10.02	10.25
154.5	15.56	18.29	14.25	9.97	10.02
155.0	15.48	18.23	14.76	10.08	9.87
155.5	15.37	18.11	15.27	10.19	9.81
156.0	15.27	17.76	15.83	10.45	9.73
156.5	15.04	17.59	16.21	10.74	9.81
157.0	15.03	17.29	16.48	11.19	10.09
157.5	14.89	17.00	16.72	11.61	10.34
158.0	14.90	16.91	16.88	12.24	10.72
158.5	14.71	16.75	17.01	12.77	11.13
159.0	14.55	16.57	17.11	13.31	11.74
159.5	14.45	16.40	17.19	13.96	12.16
160.0	14.31	16.29	17.26	14.70	12.79
160.5	14.20	16.11	17.50	15.46	13.36
161.0	14.08	15.97	17.62	16.26	14.13
161.5	14.04	15.90	17.67	16.80	14.90
162.0	13.99	15.90	17.80	17.29	15.77
162.5	13.95	15.73	17.93	17.56	16.56
163.0	13.83	15.64	18.08	17.85	17.19
163.5	13.92	15.58	18.16	18.13	17.62
164.0	13.85	15.47	18.09	18.40	17.89
164.5	13.83	15.42	18.27	18.67	18.17
165.0	13.81	15.35	18.46	19.05	18.57
165.5	13.89	15.32	18.50	19.33	18.88
166.0	13.82	15.30	18.43	19.62	19.27
166.5	13.86	15.30	18.17	19.55	19.56

CANDELA TABULATION - (Cont.)

167.0	13.96	15.30	17.84	18.80	19.84
167.5	13.98	15.27	17.47	18.33	20.37
168.0	14.05	15.29	17.13	18.24	20.79
168.5	14.09	15.22	16.71	18.17	20.96
169.0	14.11	15.22	16.43	18.09	21.12
169.5	14.24	15.22	16.25	17.98	20.97
170.0	14.22	15.23	16.14	17.78	20.55
170.5	14.14	15.14	15.94	17.59	20.18
171.0	14.31	15.06	15.70	17.22	19.70
171.5	14.34	15.06	15.49	16.94	19.26
172.0	14.30	14.95	15.17	16.57	18.88
172.5	14.35	14.92	14.96	16.25	18.62
173.0	14.32	14.90	14.66	15.87	18.02
173.5	14.40	14.87	14.47	15.51	17.55
174.0	14.34	14.84	14.18	15.21	17.02
174.5	14.40	14.74	13.98	14.94	16.54
175.0	14.46	14.73	13.84	14.87	16.01
175.5	0.00	0.00	0.00	0.00	0.00
176.0	0.00	0.00	0.00	0.00	0.00
176.5	0.00	0.00	0.00	0.00	0.00
177.0	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00
178.0	0.00	0.00	0.00	0.00	0.00
178.5	0.00	0.00	0.00	0.00	0.00
179.0	0.00	0.00	0.00	0.00	0.00
179.5	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HBIA48-LED104DMVFR35 LLIA000974-013.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1454.17	N.A.	11.90
0-30	3077.81	N.A.	25.20
0-40	5019.72	N.A.	41.20
0-60	8834.92	N.A.	72.50
0-80	11328.72	N.A.	92.90
0-90	11885.69	N.A.	97.50
10-90	11508.6	N.A.	94.40
20-40	3565.55	N.A.	29.20
20-50	5564.26	N.A.	45.60
40-70	5280.23	N.A.	43.30
60-80	2493.8	N.A.	20.50
70-80	1028.77	N.A.	8.40
80-90	556.97	N.A.	4.60
90-110	245.71	N.A.	2.00
90-120	268.22	N.A.	2.20
90-130	276.04	N.A.	2.30
90-150	292.74	N.A.	2.40
90-180	305.15	N.A.	2.50
110-180	59.44	N.A.	0.50
0-180	12190.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

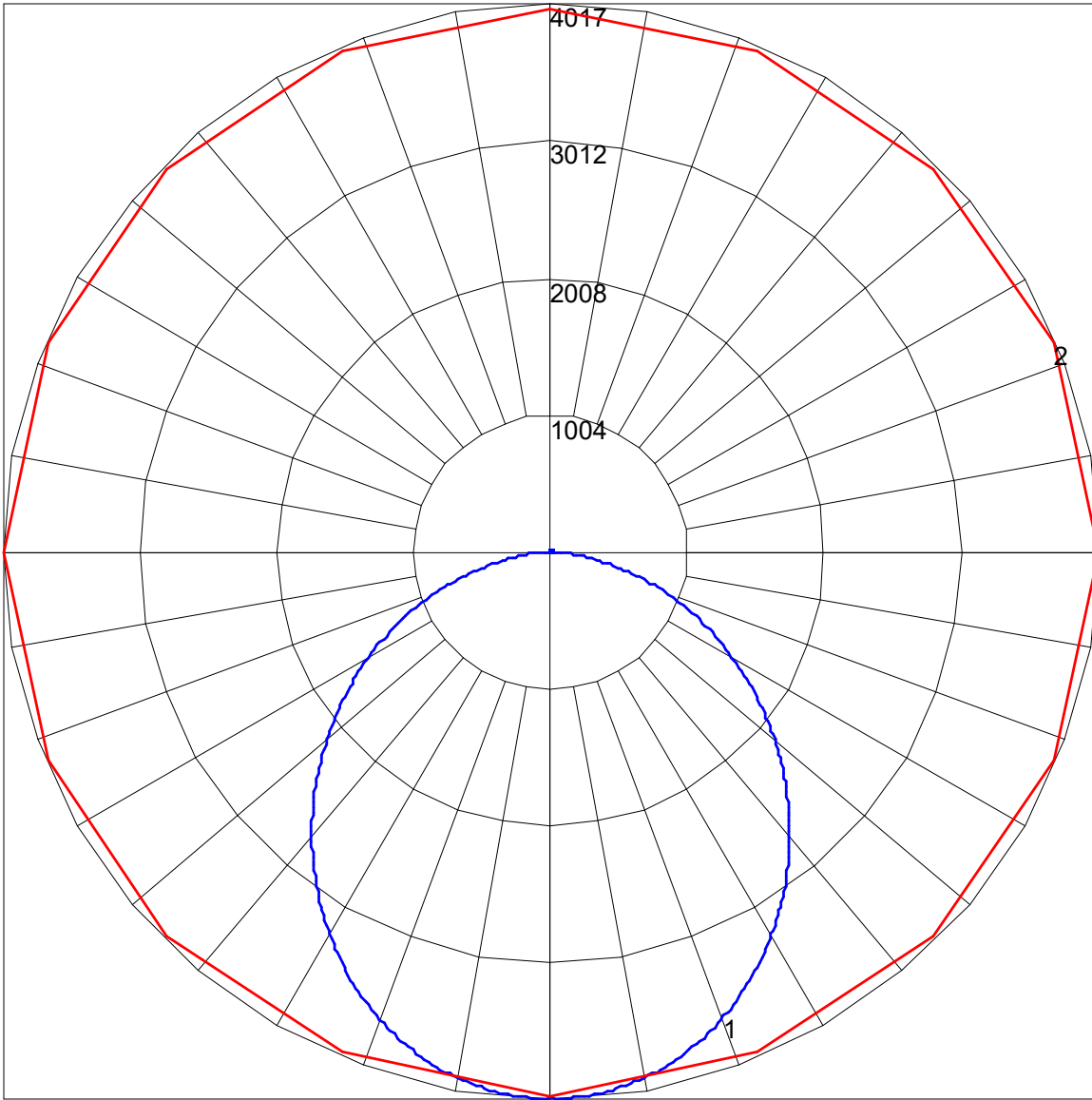
Zone	Lumens
0-10	377.10
10-20	1077.07
20-30	1623.64
30-40	1941.91
40-50	1998.71
50-60	1816.49
60-70	1465.04
70-80	1028.77
80-90	556.97
90-100	175.32
100-110	70.38
110-120	22.51
120-130	7.83
130-140	8.52
140-150	8.18
150-160	6.50
160-170	4.75
170-180	1.16

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	97
1	107	101	97	92	104	99	95	91	94	91	87	90	87	84	86	83	81	79
2	97	88	81	74	94	86	79	73	82	76	71	78	73	69	75	71	67	65
3	88	77	68	61	85	75	67	61	72	65	59	69	63	58	66	61	57	54
4	80	68	59	52	78	66	58	51	64	56	50	61	55	49	58	53	48	46
5	74	61	51	45	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	55	45	39	66	53	45	39	51	44	38	49	43	37	48	42	37	35
7	63	49	41	34	61	49	40	34	47	39	34	45	38	33	43	37	33	31
8	59	45	36	31	57	44	36	30	43	35	30	41	35	30	40	34	29	27
9	55	41	33	27	53	41	33	27	39	32	27	38	31	27	37	31	26	25
10	52	38	30	25	50	38	30	25	36	29	25	35	29	24	34	28	24	22

POLAR GRAPH



Maximum Candela = 4016.62 Located At Horizontal Angle = 0, Vertical Angle = .5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)